

# 1 - Kozlak

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- Gravity **18 BLG**
- ABV **7.7 %**
- IBU **28**
- SRM **11.4**
- Style **Traditional Bock**

## Batch size

- Expected quantity of finished beer **27 liter(s)**
- Trub loss **5 %**
- Size with trub loss **28.4 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **34.7 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **32.6 liter(s)**
- Total mash volume **41.9 liter(s)**

## Steps

- Temp **68 C**, Time **60 min**

## Mash step by step

- Heat up **32.6 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **68C**
- Sparge using **11.4 liter(s)** of **76C** water or to achieve **34.7 liter(s)** of wort

## Fermentables

| Type  | Name                     | Amount        | Yield | EBC |
|-------|--------------------------|---------------|-------|-----|
| Grain | Pilzneński               | 3 kg (32.3%)  | 81 %  | 4   |
| Grain | Monachijski              | 3 kg (32.3%)  | 80 %  | 16  |
| Grain | Strzegom Wiedeński       | 2 kg (21.5%)  | 79 %  | 10  |
| Grain | Karmelowy Jasny<br>30EBC | 0.8 kg (8.6%) | 75 %  | 30  |
| Grain | Strzegom Karmel<br>600   | 0.5 kg (5.4%) | 68 %  | 150 |

## Hops

| Use for             | Name                  | Amount | Time   | Alpha acid |
|---------------------|-----------------------|--------|--------|------------|
| Boil                | Hallertau             | 15 g   | 60 min | 4.5 %      |
| Boil                | Magnum                | 25 g   | 50 min | 13.5 %     |
| Aroma (end of boil) | Saaz (Czech Republic) | 20 g   | 10 min | 4.5 %      |